Protein Purification: Principles and Practice

by Robert E. Scopes

Springer-Verlag; New York, 1982

ix + 282 pages. £24.00, $31.60

In his preface, the author explains that this book is intended to guide the newcomer to protein purification through the range of fractionation methods available; to provide for the increasing number of biologists who are interested in particular proteins rather than proteins in general. It is well designed to do this.

The first two chapters deal with some basic techniques and contain useful practical tips of a sort not found in journal literature or more comprehensive treatises. There follow a series of chapters describing the various methods of purification – from salt fractionation to affinity chromatography and clonal selection. The principles underlying the methods are discussed in sufficient detail to give the reader some understanding of what he needs to do and also to enable him to benefit from the discussion of strategy of approach. The book demonstrates that recent increases in our knowledge of protein chemistry have taken much of the mystery out of the art of protein purification. The author however adds the caution that there is still plenty of scope for the pragmatic approach. The ingenious modern methods, such as affinity chromatography, are not 'cure-alls' and often pose difficulties not anticipated on the basis of a casual acquaintance therewith.

The later chapters, on monitoring the purification and establishing criteria of purity, are strongly orientated towards isolation of enzymes. Greater recognition of non-enzymic proteins, particularly in relation to assessment of purity, would have allowed a more satisfactory treatment of this important topic.

Though aimed at the tyro, this book will be found useful by many who already have experience in the field.

G. Leaf

The Determination of Ionization Constants: A Laboratory Manual (Third Edn)

by A. Albert and E.P. Serjeant

Chapman and Hall; London, 1984

x + 218 pages. £15.00

With two such immensely experienced laboratory scientists as Professor Albert and Dr Serjeant to guide us, we need have no fears about the validity or the limitations of the practical techniques that they bring to our attention. The text is admirably lucid, and no detail either of apparatus, or (almost more important) of subsequent computation that might be of value is discernibly omitted.

There are, however, one or two more general issues that might perhaps be raised. First, since the book is described by the authors as being suitable for biochemists, it seems odd that in Chapter 9 the pK_a values for pyruvic and lactic acids are relegated to a footnote, while 3-hydroxybutyric and malic acids do not appear at all. Nor, for that matter, do carbonic acid or ammonia.